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CLAIMS

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1. A bale handling apparatus comprising a bale support surface and bale displacement means for displacing the bale in a controlled manner off the bale support surface.
2. A bale handling apparatus as claimed in claim 1, wherein the bale displacement means comprises a movable member which engages an end face of the bale.
3. A bale handling apparatus as claimed in claim 2, wherein the movable member comprises a generally planar body.
4. A bale handling apparatus as claimed in claim 3, wherein the planar body comprises a movable wall or gate.
5. A bale handling apparatus as claimed in any of claims 2 to 4, wherein the bale displacement means further comprises one or more worm drives for displacing the movable member.
6. A bale handling apparatus as claimed in claim 5, comprises two worm drives, located on opposite sides of the apparatus.
7. A bale handling apparatus as claimed in claim 1, wherein the bale displacement means comprises means for fixedly securing a cut end of one or more bale bindings and for pulling the other end of the or each bale binding.
8. A bale handling apparatus as claimed in claim 7, wherein the free end of the or each binding may be wound onto a driven rotatable drum member.
9. A bale handling apparatus as claimed in claim 7, wherein the free end of the or each binding is releasably securable to one of a series of clamps forming part of a conveyor apparatus.
10. A bale handling apparatus as claimed in any of the preceding claims, wherein the support surface comprises a substantially smooth plate upon which the bale can slide.
11. A bale handling apparatus as claimed in any of claims 1 to 9, wherein the support surface comprises a plurality of spaced-apart support members.

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12. A bale handling apparatus as claimed in claim 11, wherein the support members extend in the direction of displacement of the bale.

13. A bale handling apparatus as claimed in any of claims 1 to 9, wherein the bale support surface is movable in order to displace a bale supported by it.

14. A bale handling apparatus as claimed in claim 13, wherein the bale support surface comprises the upper surface of a conveyor apparatus.

15. A bale handling apparatus as claimed in claim 14, wherein the conveyor apparatus is operable in both directions.

16. A bale handling apparatus as claimed in any of the preceding claims, further comprising two side walls which, together with bale support surface, define a channel for receipt of a bale.

17. A bale handling apparatus as claimed in claim 16, wherein the bale-receiving channel is elongate.

18. A bale handling apparatus as claimed in claim 17, wherein the longitudinal axis of the bale-receiving channel is transverse to the forward direction of a vehicle upon which it is mounted.

19. A bale handling apparatus as claimed in claim 17, wherein the longitudinal axis of the bale-receiving channel is parallel to the forward direction of a supporting vehicle upon which it is mounted.

20. A bale handling apparatus as claimed in claim 17, in which the apparatus is adjustable between a first position in which the longitudinal axis of the bale-receiving channel is parallel to the forward direction of a supporting vehicle upon which it is mounted and a second position in which the longitudinal axis of the bale-receiving channel is transverse to the forward direction of the supporting vehicle.

21. A bale handling apparatus as claimed in any of claims 16 to 20, further comprising a wall at one end of the channel and a discharge opening at the opposite end.

22. A bale handling apparatus as claimed in any of claims 16 to 21,

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wherein the edges of the side walls adjacent to the open end wall are tapered.

23. A bale handling apparatus as claimed in any of the preceding claims, wherein the bale support surface is elongate.

24. A bale handling apparatus as claimed in any of the preceding claims, further comprising attachment means for connection to a vehicle.

25. A bale handling apparatus as claimed in any of the preceding claims, further comprising means for increasing the effective length of the bale support surface.

26. A bale handling apparatus as claimed in claim 25, comprising a slide member which is releasably positionable beyond the bale support surface.

27. A bale handling apparatus as claimed in claim 26, wherein the slide member is pivotally mounted.

28. A bale handling apparatus as claimed in any of the preceding claims, further comprising agitating means for breaking up and/or propelling portions of a bale as they are displaced off the bale support surface.

29. A bale handling apparatus as claimed in claim 28, wherein the agitating means is displaceable into and out of the path of a bale.

30. A bale handling apparatus as claimed in claim 28 or claim 29, wherein the agitating means comprises a rotatable member having projecting portions.

31. A bale handling apparatus as claimed in any of claims 28 to 30, further comprising a plurality of agitating means.

32. A bale handling apparatus as claimed in claim 31, comprising a first agitating means adapted to engage the upper portion of a bale and a second agitating means adapted to engage the lower portion of a bale.

33. A bale handling apparatus as claimed in any of the preceding claims, further comprising means for directing material displaced from the bale support surface.

34. A bale handling apparatus as claimed in claim 33, further comprising a conveyor located adjacent to the discharge end of the bale support surface.

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35. A bale handling apparatus as claimed in claim 34, wherein the direction of movement of the conveyor is transverse to the direction of the movement of the bale.

36. A bale handling apparatus as claimed in claim 34 or claim 35, wherein the conveyor is operable in two directions.

37. A bale handling apparatus as claimed in any of claims 34 to 36, wherein the conveyor comprises an endless conveyor.

38. A bale handling apparatus as claimed in any of the preceding claims, wherein the apparatus is actuated hydraulically.

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